

## **CONTINUOUS BASELINE STUDY**

**Project 1108-13**

**Progress Report 103**

**to**

**FOURDRINIER KRAFT BOARD INSTITUTE, INC.**

**February 1, 1956**

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THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

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In conjunction with the F.K.I. Continuous Baseline Study, one hundred and thirteen different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by sixteen different F.K.I. mills to The Institute of Paper Chemistry for testing during the period January 1 through January 31. In addition to the 42-lb. kraft linerboard, one sample of drum linerboard and four samples of miscellaneous linerboard were submitted for evaluation by one of the participating mills. The results on the special stock are tabulated separately in this report. A tabulation on the number of samples classified according to mill may be seen in Table I.

TABLE I  
DISTRIBUTION OF 42-LB. LINERBOARD SAMPLES

Mill Code	Samples Submitted
A	10
B	8
C	8
D	10
E	2
F	11
G	10
H	8
I	7
J	4
K	3
L	10
M	5
N	6
O	0
P	6
Q	<u>5</u>

These sample lots were tested for basis weight, caliper, bursting strength, and Elmendorf tear. The average strength results for each mill may be seen in Table II and are graphically presented in Figures 1 to 5. In addition to a comparison of the mill averages for the various tests, Table II also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. The cumulative F.K.I. average is based on the results for the previous twelve months excluding the current period. Hence, in the case of the current report, it covers the period from January 1, 1955, to December 31, 1955. The F.K.I. indexes are obtained as follows:

$$\frac{\text{current F.K.I. average}}{\text{cumulative F.K.I. average}} \times 100 = \text{F.K.I. index (\%)}$$

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 43.0 lb. The cumulative F.K.I. average basis weight is also 43.0 lb. Hence, the index for basis weight determined in per cent as indicated above is 100.0. This signifies that the current average basis weight is the same as the cumulative average, which in this case covered the period from January 1, 1955, through December 31, 1955.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mill K has the highest average basis weight, it being 43.9 lb. or approximately 4.5% higher than the 42-lb. specification. On the other hand, Mill N has the lowest average basis weight, it being 42.4 lb., 1.0% higher than the 42-lb. specification.

The amount by which the mills vary from the 42-lb. specification is as follows:

Mill Code	Percent
A	+2.6
B	+1.4
C	+2.6
D	+3.1
E	+1.9
F	+1.4
G	+2.6
H	+2.1
I	+2.6
J	+1.9
K	+4.5
L	+1.4
M	+3.3
N	+1.0
P	+1.2
Q	+4.3

A comparison of the average basis weight data for the previous period with the current F.K.I. average indicates that the basis weight results have remained the same.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill averages vary from a low of 11.7 for Mill F to a high of 14.4 for Mill Q, the average being 12.8 which is the same as the cumulative F.K.I. average.

The average bursting strength values obtained for each mill are graphically presented in Figure 3. It may be observed in Table II that the average bursting strength values for the various mills range from a low of

101 for Mill Q to a high of 119 for Mill B. The current F.K.I. average bursting strength is 109, slightly lower than the cumulative F.K.I. average of 110.

A graphic comparison of the Elmendorf tear results for the various mills is given in Figures 4 and 5. The data of Table II show that Mill K has the highest average machine direction tear value of 376 units whereas Mill B has the lowest value of 307 units. Mill F has the highest cross-machine direction tear value of 415 units and Mill B has the lowest value of 354 units. It may be noted that the current F.K.I. average machine and cross-machine direction tear results are slightly lower than the cumulative averages.

A comparison of the F.K.I. indexes indicates that, for the current period, the current F.K.I. averages for bursting strength and Elmendorf tear are slightly lower than the respective cumulative F.K.I. averages, whereas the current F.K.I. averages for basis weight and caliper are the same as the cumulative.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XIX for mills A to Q, respectively. In addition to the current and cumulative averages, the mill factor and mill index are given for each mill. The cumulative mill average is the average test result obtained on the samples submitted by the particular mill for the previous twelve months excluding the current period. The mill factor and the mill index are obtained as follows:

$$\frac{\text{current mill average}}{\text{cumulative mill average}} \times 100 = \text{mill factor } (\%)$$

$$\frac{\text{current mill average}}{\text{cumulative F.K.I. average}} \times 100 = \text{mill index } (\%)$$

The mill factor and the mill index serve as a ready means for comparing the current mill results either with the previous results for that particular mill or with the cumulative F.K.I. results. The reports also contain a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry.

The results obtained on the special drum stock may be seen in Table XX.

It may be noted in Tables III through XX that the test data include information about the sheet finish. The summarized results for the mills which submitted sample lots during the current period are as follows:

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
A	10		
B	8		
C	8 <sup>a</sup>		
D	10		
E	2 <sup>a</sup> , 1 <sup>b</sup>		
F	11		
G	10		
H	8		
I	7 <sup>a</sup>		
J	4		
K	3		
L			10 <sup>c</sup>
M	5		
N	5 <sup>a</sup>		1 <sup>c</sup>
O	No samples submitted.		
P	6		
Q	5 <sup>a</sup>		

<sup>a</sup> One side only;    <sup>b</sup> Drum Linerboard;    <sup>c</sup> Sheet finish not reported.

The results indicate that a majority of the mills are using a water finish on their 42-lb. linerboard.



TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--JANUARY 1 THROUGH JANUARY 31, 1956

Mill	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	Elmendorf Tear, g./sheet	
				In Machine	Cross Machine
A	43.1	12.4	112	321	373
B	42.6	11.9	119	307	354
C	43.1	13.4	102	321	355
D	43.3	12.8	111	343	382
E	42.8	13.7	106	351	367
F	42.6	11.7	105	374	415
G	43.1	12.4	110	315	369
H	42.9	12.4	113	358	389
I	43.1	12.5	108	316	381
J	42.8	12.8	107	367	366
K	43.9	13.6	105	376	382
L	42.6	13.0	111	331	375
M	43.4	13.3	114	357	394
N	42.4	12.5	110	357	409
O	No samples submitted.				
P	42.5	12.3	108	348	378
Q	43.8	14.4	101	336	378
Current FKI Average:	43.0	12.8	109	342	379
Cumulative FKI Average:	43.0	12.8	110	354	384
FKI Index, %	100.0	100.0	99.1	96.6	98.7

Figure 1

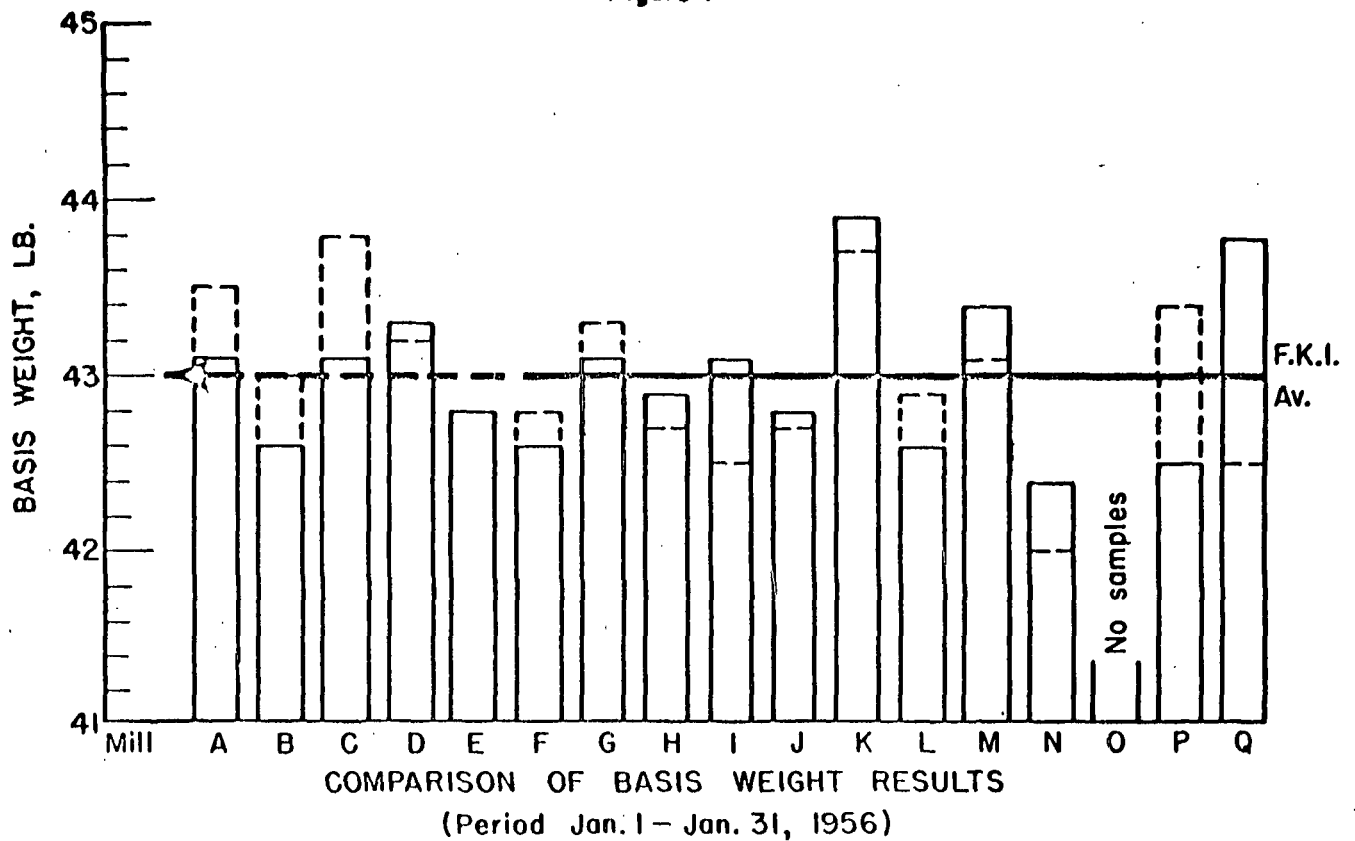
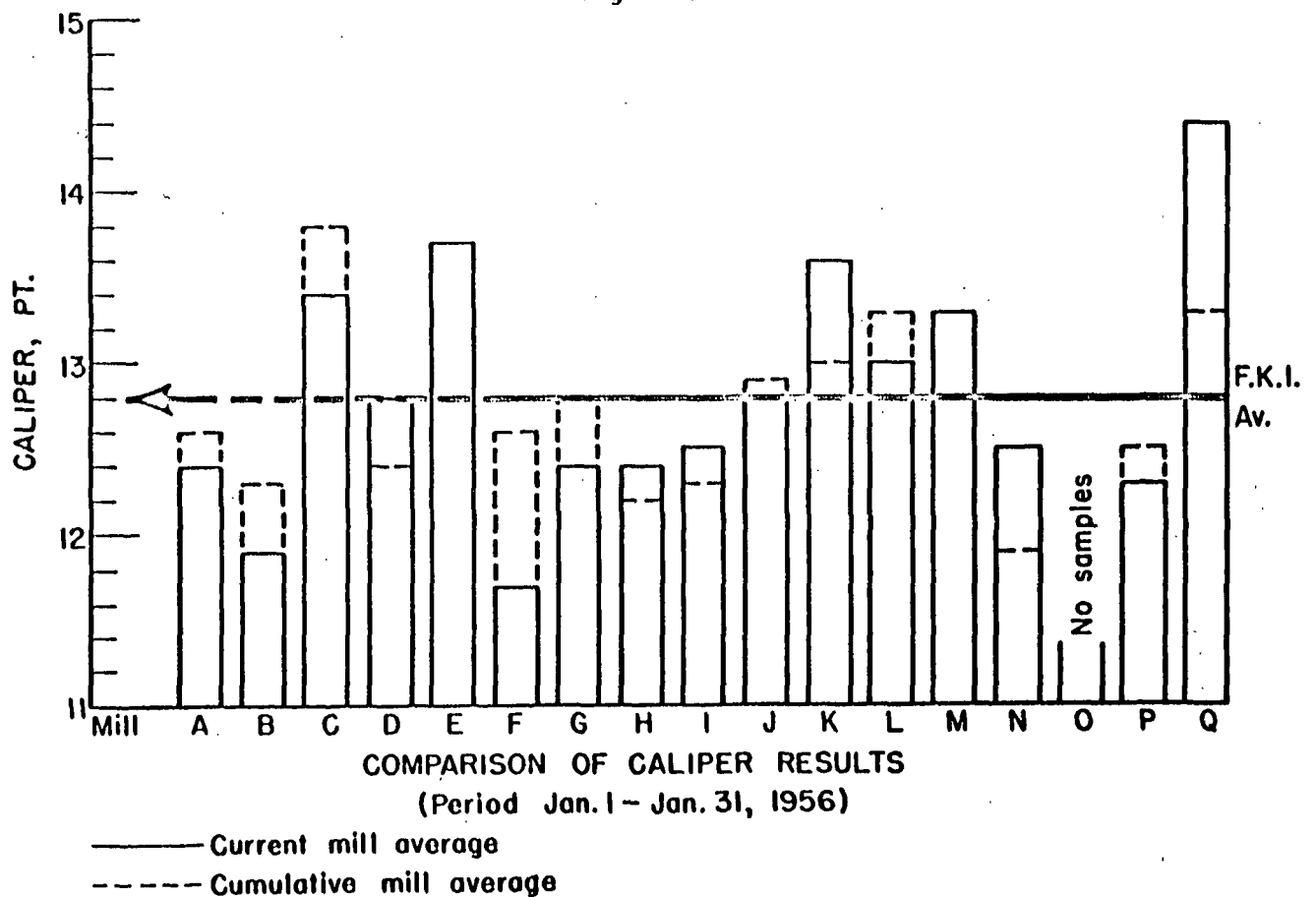


Figure 2



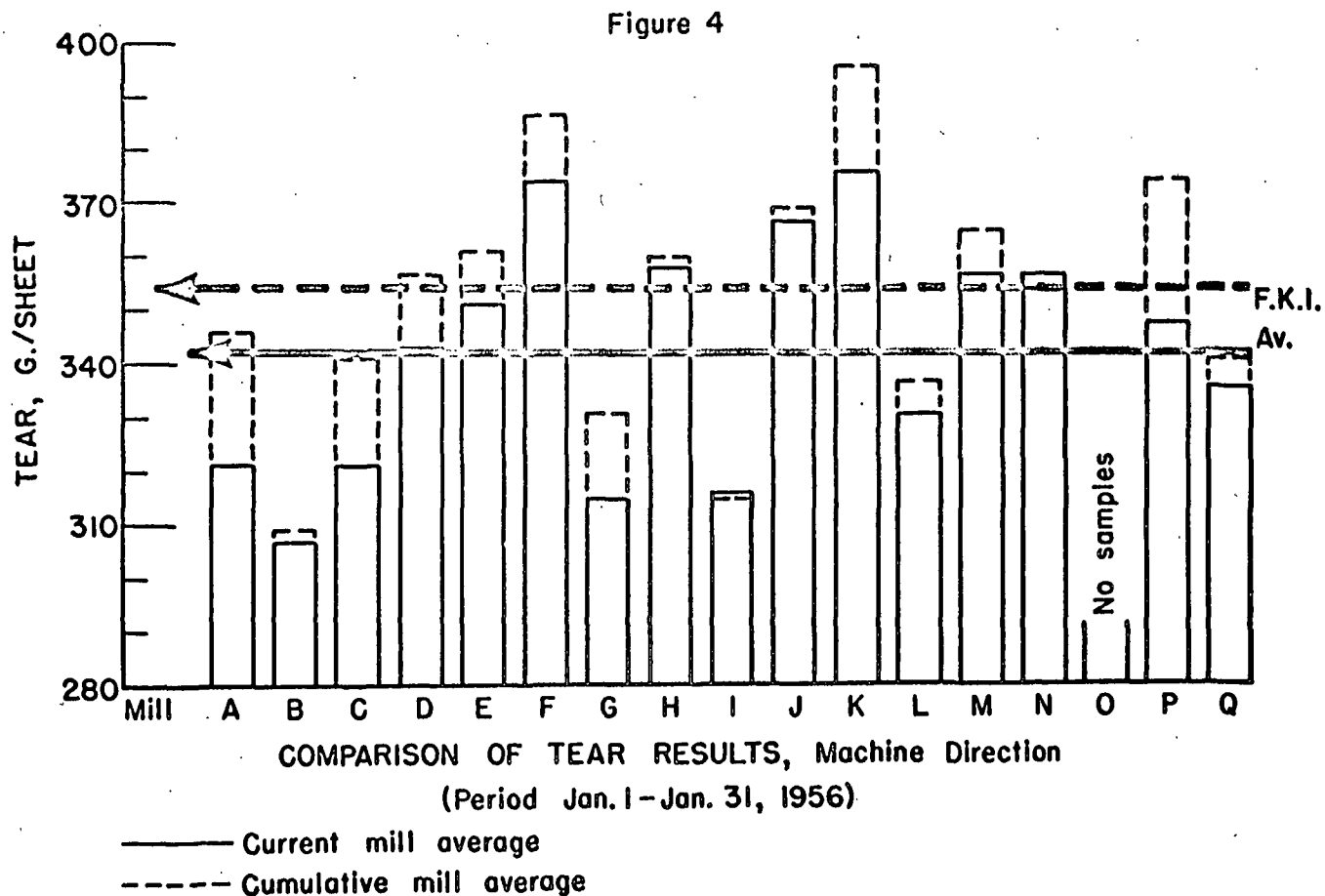
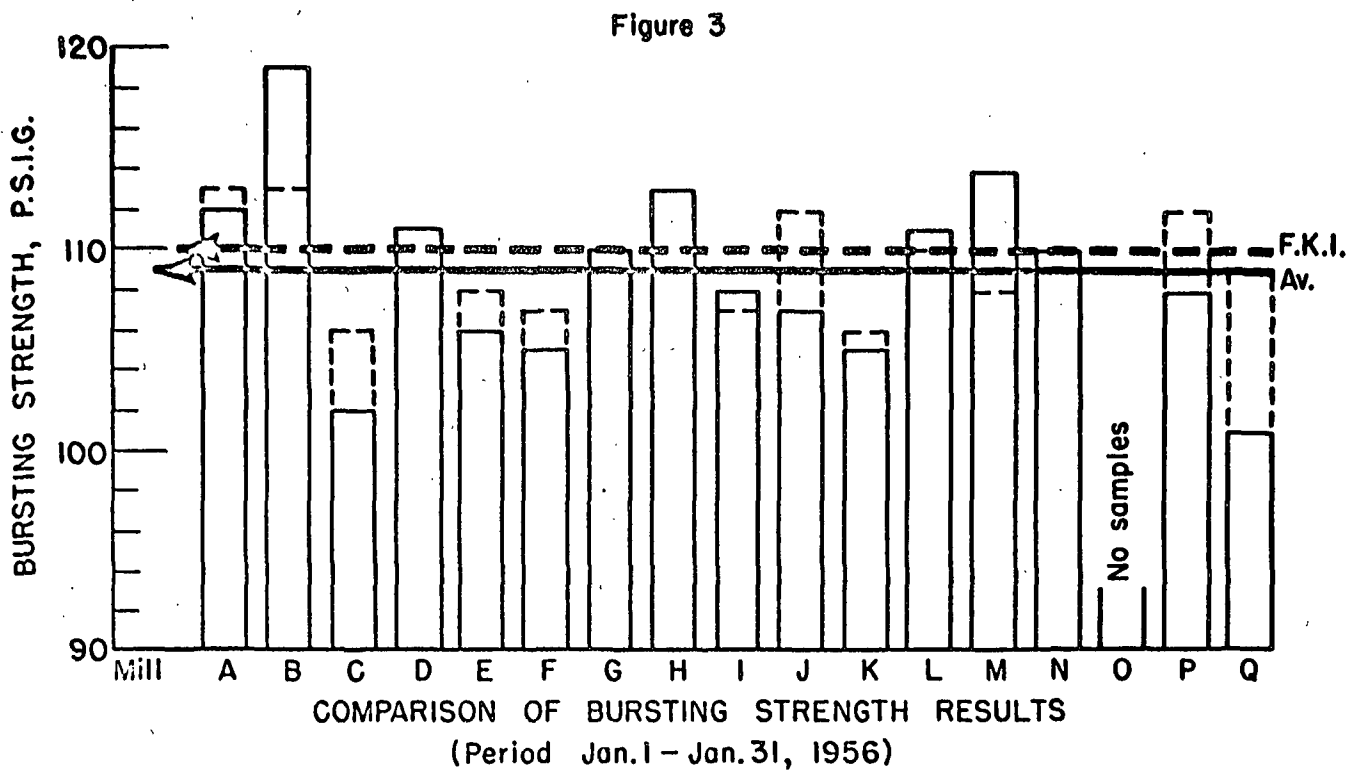
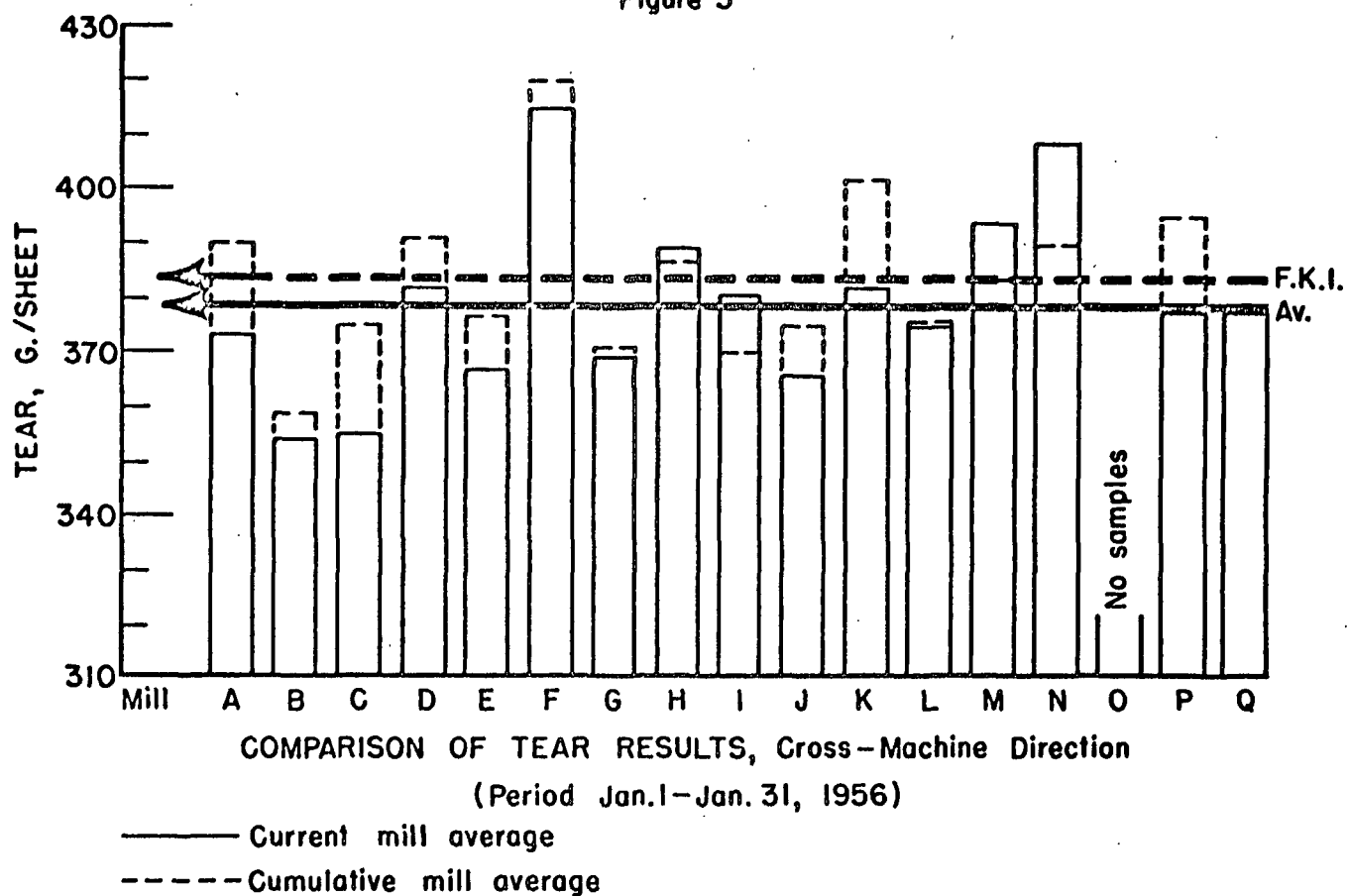


Figure 5



SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956

TABLE III  
MILL A-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		In		Across						
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Av.		
																			Av.	Av.
167715	A-716	W.F.	1/ 4/56	12/30/55	2	44.4	43.6	43.9	13.0	12.0	12.5	124	100	110	424	288	341 <sup>a</sup>	400	344	381 <sup>a</sup>
167716	A-717	W.F.	1/ 4/56	12/31/55	2	44.4	43.4	43.9	13.3	12.7	13.0	126	84	109	376	304	334	400	352	365 <sup>a</sup>
167882	A-718	W.F.	1/12/56	1/ 2/56	1	44.2	42.4	43.1	12.7	12.0	12.4	137	89	111	368	280	332 <sup>a</sup>	400	352	381 <sup>a</sup>
167883	A-719	W.F.	1/12/56	1/ 3/56	1	43.8	42.6	43.4	13.0	12.0	12.4	130	91	107	384	288	331 <sup>a</sup>	408	320	364 <sup>a</sup>
167960	A-720	W.F.	1/17/56	1/ 8/56	2	43.2	42.6	42.9	12.4	11.5	12.1	138	108	121	320	256	291	384	344	365 <sup>a</sup>
167961	A-721	W.F.	1/17/56	1/ 9/56	2	44.0	42.8	43.3	12.6	12.0	12.2	143	103	123	336	280	316 <sup>a</sup>	424	352	383 <sup>a</sup>
168064	A-722	W.F.	1/21/56	1/16/56	1	43.8	42.2	43.0	12.8	12.0	12.4	128	82	108	432	280	342 <sup>a</sup>	416	344	380 <sup>a</sup>
168065	A-723	W.F.	1/21/56	1/16/56	1	44.0	42.0	43.0	12.9	12.0	12.5	125	80	109	368	296	326 <sup>a</sup>	400	352	382 <sup>a</sup>
168138	A-724	W.F.	1/27/56	1/23/56	2	43.0	42.2	42.6	13.0	11.8	12.4	125	88	111	344	280	305 <sup>a</sup>	392	328	364 <sup>a</sup>
168139	A-725	W.F.	1/27/56	1/23/56	1	43.0	42.0	42.2	13.0	11.3	12.2	125	80	108	320	264	296 <sup>a</sup>	400	328	369 <sup>a</sup>
Current Mill Average:								43.1		12.4		112		321			373			
Cumulative Mill Average:								43.5		12.6		113		346			390			
Mill Factor, %								99.1		98.4		99.1		92.8			95.6			
Mill Index, %								100.2		96.9		101.8		90.7			97.1			

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE IV  
MILL B--42-LB, LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		Elmendorf Tear, g./sheet		Across	
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
167668	B-1258	W.F.	1/ 3/56	12/20/55	1	43.8	41.6	12.3	11.7	11.9	136	95	115	344	240
167669	B-1259	W.F.	1/ 3/56	12/22/55	1	43.8	41.6	12.2	11.6	11.9	133	92	118	376	248
167717	B-1260	W.F.	1/ 4/56	12/28/55	1	43.8	41.6	12.6	11.7	12.0	139	98	118	328	272
167718	B-1261	W.F.	1/ 4/56	12/30/55	1	43.4	42.0	12.2	11.4	11.8	136	103	119	352	264
167939	B-1262	W.F.	1/14/56	1/ 2/56	1	43.8	41.4	12.3	11.3	11.8	139	107	119	368	232
167940	B-1263	W.F.	1/14/56	1/ 4/56	1	43.2	40.2	12.3	11.5	11.8	141	100	119	368	248
167970	B-1264	W.F.	1/17/56	1/ 8/56	1	43.6	42.0	12.5	11.4	11.9	146	75	118	344	256
167971	B-1265	W.F.	1/17/56	1/10/56	1	44.0	42.0	12.3	11.5	12.0	137	100	123	424	272
Current Mill Average:						42.6		11.9		119		307		354	
Cumulative Mill Average:						43.0		12.3		113		309		359	
Mill Factor, %						99.1		96.7		105.3		99.4		98.6	
Mill Index, %						99.1		93.0		108.2		86.7		92.2	

aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE V

MILL C-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i., gage			Elmendorf Tear, g./sheet		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
167822	C-721	WF ISL	1/10/56	12/19/55	1	45.8	43.0	44.2	14.3	13.0	13.7	117	82	98	384	304	330 <sup>a</sup>
167823	C-722	WF ISL	1/10/56	12/19/55	1	45.6	43.0	43.8	14.5	13.0	13.9	115	75	96	360	272	313 <sup>a</sup>
167824	C-723	WF ISL	1/10/56	12/27/55	1	44.0	41.4	42.4	14.0	12.8	13.3	123	85	103	352	288	320 <sup>a</sup>
167809	C-724	WF ISL	1/9/56	12/27/55	1	43.4	41.0	42.1	13.8	12.3	13.1	123	82	103	336	280	307 <sup>a</sup>
167810	C-725	WF ISL	1/9/56	12/28/55	1	44.2	40.6	42.6	14.2	12.0	13.5	123	93	106	344	280	317 <sup>a</sup>
167811	C-726	WF ISL	1/9/56	12/28/55	1	44.4	41.8	43.0	13.9	12.5	13.4	126	95	108	368	288	322 <sup>a</sup>
167877	C-727	WF ISL	1/10/56	12/29/55	1	44.0	42.0	43.4	13.9	12.5	13.2	120	85	100	384	272	338
167878	C-728	WF ISL	1/10/56	12/29/55	1	44.0	41.6	43.2	13.8	12.4	13.1	117	94	104	368	288	323 <sup>a</sup>
Current Mill Average:						43.1			13.4			102			321		
Cumulative Mill Average:						43.8			13.8			106			341		
Mill Factor, %						98.4			97.1			96.2			94.1		
Mill Index, %						100.2			104.7			92.7			90.7		

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE VI  
MILL D-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i.		Elmendorf Tear, g./sheet		Across	
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
167690	D-933	W.F.	1/3/56	12/29/55	4	43.4	42.2	42.8	13.0	12.3	12.6	400	296	339 <sup>a</sup>	388 <sup>a</sup>
167708	D-934	W.F.	1/3/56	12/30/55	4	43.8	42.4	43.4	12.7	12.0	12.3	408	304	345 <sup>a</sup>	374 <sup>a</sup>
167740	D-935	W.F.	1/5/56	12/31/55	4	43.0	42.0	42.2	12.2	12.0	12.1	360	272	325 <sup>a</sup>	377 <sup>a</sup>
167879	D-936	W.F.	1/11/56	1/5/56	4	43.0	41.4	42.4	13.2	12.4	12.9	400	296	345 <sup>a</sup>	367 <sup>a</sup>
167880	D-937	W.F.	1/11/56	1/6/56	4	46.0	44.0	44.6	13.1	12.1	12.7	464	344	372 <sup>a</sup>	405 <sup>a</sup>
167881	D-938	W.F.	1/11/56	1/7/56	4	44.0	42.0	43.3	13.2	12.4	12.7	432	296	362 <sup>a</sup>	383 <sup>a</sup>
168045	D-939	W.F.	1/18/56	1/12/56	4	47.0	43.4	44.2	14.3	13.2	13.8	400	304	349 <sup>a</sup>	386 <sup>a</sup>
168046	D-940	W.F.	1/18/56	1/13/56	4	45.0	42.2	44.0	14.0	12.5	13.3	384	296	341 <sup>a</sup>	320
168077	D-941	W.F.	1/23/56	1/18/56	4	44.6	42.2	43.8	13.5	12.8	13.1	384	312	349 <sup>a</sup>	352
168078	D-942	W.F.	1/23/56	1/19/56	4	43.8	42.2	42.8	12.7	12.1	12.4	344	264	303 <sup>a</sup>	312
Current Mill Average:						43.3		12.8		111		343		382	
Cumulative Mill Average:						43.2		12.4		111		357		391	
Mill Factor, %						100.2		103.2		100.0		96.1		97.7	
Mill Index, %						100.7		100.0		100.9		96.9		99.5	

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.



SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE VII  
MILL E-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i., gage			Elmendorf Tear, g./sheet		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
167682	E-195	WFLS	1/ 3/56	12/29/55	2	43.6	41.6	42.6	13.9	12.9	13.5	112	79	102	416	320	367 <sup>a</sup>
167798	E-196	WFLS	1/ 7/56	1/ 3/56	2	44.2	42.2	43.0	14.8	12.7	14.0	146	92	110	408	280	334 <sup>a</sup>
Current Mill Average:						42.8			13.7			106			351		
Cumulative Mill Average:						42.8			13.7			108			361		
Mill Factor, %						100.0			100.0			98.1			97.2		
Mill Index, %						99.5			107.0			96.4			99.2		

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE VIII

MILL F-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		Elmendorf Tear, g./sheet		Across							
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Av.			
167674	F-72	W.B.	1/3/56	12/2/55	-	44.0	42.0	43.0	11.8	10.9	11.4	130	90	108	448	320	377 <sup>a</sup>	456	344	394 <sup>a</sup>	
167675	F-73	W.B.	1/3/56	12/7/55	-	44.6	41.2	42.8	12.3	11.4	11.9	114	76	100	424	336	375 <sup>a</sup>	464	408	429 <sup>a</sup>	
167676	F-74	W.B.	1/3/56	12/9/55	-	43.2	39.2	41.1	12.8	11.0	11.7	124	80	101	400	328	354 <sup>a</sup>	440	368	405 <sup>a</sup>	
167677	F-75	W.B.	1/3/56	12/9/55	-	44.2	40.6	42.8	12.5	11.0	11.9	127	87	104	416	352	377 <sup>a</sup>	480	376	423 <sup>a</sup>	
167678	F-76	W.B.	1/3/56	12/15/55	-	44.0	40.8	41.8	12.1	11.1	11.7	127	71	101	480	344	381 <sup>a</sup>	496	352	415 <sup>a</sup>	
167679	F-77	W.B.	1/3/56	12/15/55	-	45.0	41.6	43.1	12.5	11.3	11.9	117	85	103	408	312	366 <sup>a</sup>	464	384	418 <sup>a</sup>	
168087	F-1	W.B.	1/23/56	1/3/56	-	44.2	42.4	43.3	12.1	11.0	11.6	131	95	112	392	320	355 <sup>a</sup>	464	336	383 <sup>a</sup>	
168088	F-2	W.B.	1/23/56	1/6/56	-	44.0	41.2	43.1	12.3	11.2	11.8	137	94	109	408	336	371 <sup>a</sup>	456	360	419 <sup>a</sup>	
168103	F-3	W.B.	1/24/56	1/6/56	-	43.8	40.0	42.0	12.3	10.9	11.7	129	88	108	432	328	382 <sup>a</sup>	488	360	423 <sup>a</sup>	
168104	F-4	W.B.	1/24/56	1/13/56	-	44.0	40.2	43.0	12.1	11.0	11.6	131	75	107	456	320	375 <sup>a</sup>	464	352	409 <sup>a</sup>	
168105	F-5	W.B.	1/24/56	1/16/56	-	44.0	41.8	43.0	12.9	11.0	11.9	123	84	102	464	368	401 <sup>a</sup>	488	384	443 <sup>a</sup>	
Current Mill Average:						42.6		11.7		105		374		415							
Cumulative Mill Average:						42.8		12.6		107		387		420							
Mill Factor, %						99.5		92.9		98.1		96.6		98.8							
Mill Index, %						99.1		91.4		95.5		105.6		108.1							

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE IX  
MILL G-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I., Fage			Elmendorf Tear, g./sheet		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
167943	G-701	W.F.	1/14/56	12/28/55	2	45.2	43.6	44.3	13.2	12.3	12.8	137	84	113	368	312	334 <sup>a</sup>
167944	G-702	W.F.	1/14/56	12/28/55	2	45.4	43.8	44.3	13.4	12.0	12.8	135	79	111	392	256	327 <sup>a</sup>
167963	G-703	W.F.	1/17/56	12/30/55	2	45.2	42.0	44.2	13.4	12.2	12.9	138	95	118	400	296	338 <sup>a</sup>
167964	G-704	W.F.	1/17/56	12/30/55	2	45.4	44.0	44.7	13.0	12.0	12.5	132	93	112	384	280	331 <sup>a</sup>
167965	G-705	W.F.	1/17/56	12/28/55	2	44.8	42.6	43.9	13.0	12.0	12.5	149	91	117	368	296	331
167966	G-706	W.F.	1/17/56	12/22/55	2	44.0	41.0	42.8	12.9	10.9	12.0	128	79	106	320	264	290 <sup>a</sup>
167967	G-707	W.F.	1/17/56	12/22/55	2	44.0	41.4	42.2	12.4	11.4	12.0	123	80	104	368	280	319 <sup>a</sup>
167968	G-708	W.F.	1/17/56	1/10/56	2	42.2	40.8	41.5	12.5	11.4	12.0	124	77	104	352	272	303 <sup>a</sup>
168047	G-709	W.F.	1/18/56	1/10/56	2	42.0	40.4	41.4	12.3	11.8	12.1	123	89	108	336	248	286
168048	G-710	W.F.	1/18/56	1/10/56	2	42.6	41.0	41.8	12.4	11.7	12.1	127	80	107	352	224	293 <sup>a</sup>
Current Mill Average:						43.1			12.4			110			315		
Cumulative Mill Average:						43.3			12.8			109			331		
Mill Factor, %						99.5			96.9			100.9			95.2		
Mill Index, %						100.2			96.9			100.0			89.0		

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE X

MILL H-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		Elmendorf Tear, g./sheet	
						Max.	Min. Av.	Max.	Min. Av.	Max.	Min. Av.	Max.	Min. Av.
167773	H-547	W.F. <sup>b</sup>	1/ 6/56	12/18/55	2	44.0	43.0 43.7	12.5	11.6 12.1	146	93 118	432	328 383 <sup>a</sup>
167774	H-548	W.F. <sup>b</sup>	1/ 6/56	12/20/55	2	43.2	41.6 42.2	12.8	12.0 12.3	132	92 110	432	272 336 381 <sup>a</sup>
167775	H-549	W.F. <sup>b</sup>	1/ 6/56	12/28/55	2	43.2	42.0 42.4	13.5	12.5 13.1	138	74 111	376	312 344 375 <sup>a</sup>
167776	H-550	W.F. <sup>b</sup>	1/ 6/56	12/29/55	2	44.0	42.2 43.1	13.2	12.4 12.9	136	83 111	408	320 359 <sup>a</sup> 488 376 407 <sup>a</sup>
167972	H-551	W.F. <sup>b</sup>	1/17/56	1/ 2/56	2	43.6	42.4 43.0	12.3	11.5 11.9	127	98 112	424	264 358 464 368 410 <sup>a</sup>
167973	H-552	W.F. <sup>b</sup>	1/17/56	1/ 3/56	2	44.0	42.2 43.0	12.9	12.0 12.3	130	86 108	416	304 367 <sup>a</sup> 432 344 383 <sup>a</sup>
167974	H-553	W.F. <sup>b</sup>	1/17/56	1/ 8/56	2	44.6	43.4 43.8	12.7	11.8 12.3	141	96 118	424	288 377 <sup>a</sup> 456 360 395 <sup>a</sup>
167975	H-554	W.F. <sup>b</sup>	1/17/56	1/ 9/56	2	43.0	42.0 42.2	12.9	11.9 12.2	145	95 115	400	304 340 <sup>a</sup> 408 336 375 <sup>a</sup>
Current Mill Average:						42.9		12.4		113		358	
Cumulative Mill Average:						42.7		12.2		109		360	
Mill Factor, %						100.5		101.6		103.7		99.4	
Mill Index, %						99.8		96.9		102.7		101.1	

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

<sup>b</sup>The mill data sheet identifies the finish as WFLS.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XI  
MILL I--42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i.		Elmendorf Tear, g./sheet		Across	
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
167680	I-516	WFLS	1/3/56	12/17/55	1	44.4	42.0	13.0	11.5	12.6	87	104	384	280	330 <sup>a</sup>
167720	I-517	WFLS	1/4/56	12/28/55	1	44.0	42.0	12.6	11.7	12.4	81	107	384	248	296
167947	I-518	WFLS	1/16/56	1/5/56	1	44.2	42.0	12.9	11.9	12.5	91	110	352	256	307
167948	I-519	WFLS	1/16/56	1/9/56	1	44.0	42.0	12.5	11.7	12.4	92	108	432	304	335 <sup>a</sup>
168066	I-520	WFLS	1/21/56	1/11/56	1	44.4	42.2	13.6	12.8	12.9	84	111	384	256	311 <sup>a</sup>
168067	I-521	WFLS	1/21/56	1/12/56	1	44.2	42.6	13.7	12.9	13.5	87	112	352	264	314
168102	I-522	WFLS	1/24/56	1/17/56	1	43.8	41.4	13.0	12.0	12.9	84	106	384	288	318 <sup>a</sup>
Current Mill Average:						43.1		12.5		108		316		381	
Cumulative Mill Average:						42.5		12.3		107		315		370	
Mill Factor, %						101.4		101.6		100.9		100.3		103.0	
Mill Index, %						100.2		97.7		98.2		89.3		99.2	

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XII  
MILL J--42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I., Page		Elmendorf Tear, g./sheet								
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.			
167688	J-573	W.F.	1/ 3/56	12/21/55	-	44.6	42.0	43.7	13.8	12.5	13.1	117	82	104	448	368	395 <sup>a</sup>	400	328	371 <sup>a</sup>
167689	J-574	W.F.	1/ 3/56	12/21/55	-	44.6	42.0	43.5	13.8	12.1	13.0	126	82	107	408	336	367 <sup>a</sup>	416	344	378 <sup>a</sup>
167807	J-575	W.F.	1/ 9/56	1/ 2/56	-	42.4	40.0	41.6	12.9	11.9	12.4	124	98	109	408	304	347 <sup>a</sup>	400	320	348
167808	J-576	W.F.	1/ 9/56	1/ 3/56	-	44.0	42.0	42.5	13.0	12.0	12.5	130	80	108	400	320	361 <sup>a</sup>	424	320	367 <sup>a</sup>
Current Mill Average:								42.8			12.8			107			367			366
Cumulative Mill Average:								42.7			12.9			112			369			375
Mill Factor, %								100.2			99.2			95.5			99.5			97.6
Mill Index, %								99.5			100.0			97.3			103.7			95.3

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XIII  
MILL K-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. Edge		Elmendorf Tear, g./sheet	
						Max.	Min.	Max.	Min.	Max.	Min.	In	Across
167772	K-1	S.F.	1/6/56	1/2/56	7	45.6	40.4	13.2	12.2	128	83	448	352
168062	K-2	S.F.	1/20/56	1/11/56	7	45.8	42.0	14.0	13.0	134	83	448	352
168085	K-3	S.F.	1/23/56	1/18/56	7	45.6	43.4	14.8	13.8	129	82	416	312
Current Mill Average:						43.9		13.6		105		376	
Cumulative Mill Average:						43.7		13.0		106		396	
Mill Factor, %						100.5		104.6		99.1		94.9	
Mill Index, %						102.1		106.2		95.5		106.2	
												382	
												402	
												387 <sup>a</sup>	
												432	
												424	
												368	
												383 <sup>a</sup>	
												424	
												360 <sup>a</sup>	
												424	
												344	
												377 <sup>a</sup>	

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XIV  
MILL L-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I.		Elmendorf Tear, g./sheet	
						Max.	Min.	Max.	Min.	Max.	Min.	In	Across
												Max.	Min.
167670	L-415		1/ 3/56	12/ 2/55	1	43.4	41.2	13.2	11.7	134	84	368	288
167671	L-416		1/ 3/56	12/ 5/55	1	44.0	42.2	14.2	12.5	123	84	384	296
167672	L-417		1/ 3/56	12/ 8/55	1	44.2	41.6	14.3	12.7	130	87	392	288
167673	L-418		1/ 3/56	12/13/55	1	45.6	42.0	13.8	11.7	128	74	352	288
167683	L-419		1/ 3/56	12/17/55	1	44.2	42.4	14.3	12.8	137	90	368	320
167684	L-420		1/ 3/56	12/19/55	1	44.4	42.4	13.1	11.4	124	84	352	296
168079	L-421		1/23/56	12/22/55	1	43.8	41.0	13.7	12.2	133	78	352	296
168080	L-422		1/23/56	12/29/55	1	42.6	40.4	14.0	12.2	148	105	376	296
168081	L-423		1/23/56	1/ 3/56	1	43.8	40.6	13.9	12.3	149	87	360	304
168082	L-424		1/23/56	1/ 6/56	1	44.0	40.8	13.3	12.0	131	89	360	280
Current Mill Average:						42.6		13.0		111		331	
Cumulative Mill Average:						42.9		13.3		110		337	
Mill Factor, %						99.3		97.7		100.9		98.2	
Mill Index, %						99.1		101.6		100.9		93.5	
												375	
												376	
												99.7	
												97.7	

\*This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.



SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XV  
MILL M-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet		Across	
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
167667	M-356	W.	1/3/56	12/13/55	2	44.4	41.2	13.6	12.8	13.1	12.6	272	247 <sup>a</sup>	456	336
167685	M-357	W.	1/3/56	12/23/55	2	44.2	41.8	14.0	13.1	13.6	123	272	329 <sup>a</sup>	432	344
167739	M-358	W.	1/5/56	12/29/55	4	44.6	42.0	14.0	13.0	13.4	130	368	392 <sup>a</sup>	456	384
167969	M-359	W.	1/17/56	1/6/56	4	44.0	42.4	13.6	13.0	13.3	130	352	387 <sup>a</sup>	432	368
168135	M-360	W.	1/26/56	1/12/56	2	44.8	41.6	13.3	12.2	12.8	142	288	332 <sup>a</sup>	424	360
Current Mill Average:						43.4		13.3		114		357		394	
Cumulative Mill Average:						43.1		13.3		108		365		384	
Mill Factor, %						100.7		100.0		105.6		97.8		102.6	
Mill Index, %						100.9		103.9		103.6		100.8		102.6	

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XVI  
MILL N-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i., gage			Elmendorf Tear, g./sheet		
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
167665	N-177	WFIS	1/ 3/56	12/17/55	1	43.8	41.6	42.5	13.0	11.9	12.4	127	91	111	392	312	349 <sup>a</sup>
167666	N-178	WFIS	1/ 3/56	12/16/55	1	42.2	40.4	41.7	13.1	11.1	12.2	131	94	106	440	264	341 <sup>a</sup>
167941	N-179	WFIS	1/14/56	1/ 1/56	1	44.8	43.4	43.8	13.4	12.3	12.8	125	100	112	392	328	362 <sup>a</sup>
167942	N-180	WFIS	1/14/56	1/ 1/56	1	42.8	41.0	42.0	12.9	11.5	12.1	121	81	105	432	304	354 <sup>a</sup>
167962	N-181	----	1/17/56	1/10/56	1	42.6	41.6	42.0	13.0	12.2	12.6	142	93	116	416	304	363 <sup>a</sup>
168061	N-182	WFIS	1/20/56	1/11/56	1	43.0	42.2	42.5	13.5	12.1	12.8	133	91	110	416	328	371 <sup>a</sup>
Current Mill Average:						42.4			12.5			110			357		
Cumulative Mill Average:						42.0			11.9			109			354		
Mill Factor, %						101.0			105.0			100.9			100.8		
Mill Index, %						98.6			97.7			100.0			100.8		

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XVII  
MILL O-42-LB. LINERBOARD

No samples submitted.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XVIII  
MILL P-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		Elmendorf Tear, g./sheet	
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
167709	P-138	W.F.	1/ 4/56	12/19/55	-	45.0	41.8	13.0	11.6	138	86	416	312
167710	P-139	W.F.	1/ 4/56	12/19/55	-	43.4	40.6	12.7	11.8	134	88	416	336
167711	P-140	W.F.	1/ 4/56	12/19/55	-	43.6	41.0	12.9	11.6	134	85	416	304
167712	P-141	W.F.	1/ 4/56	12/19/55	-	43.6	40.8	13.0	11.5	151	89	400	288
167713	P-142	W.F.	1/ 4/56	12/21/55	-	45.2	41.2	13.4	11.8	117	88	376	304
167714	P-143	W.F.	1/ 4/56	12/21/55	-	42.4	40.8	12.7	11.4	120	91	384	288
Current Mill Average:						42.5		12.3		108		348	
Cumulative Mill Average:						43.4		12.5		112		375	
Mill Factor, %						97.9		98.4		96.4		92.8	
Mill Index, %						98.8		96.1		98.2		98.3	

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XIX

MILL Q-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet									
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.							
167686	Q-49	WFIS	1/3/56	12/21/55	-	46.0	44.0	44.8	15.4	14.3	14.8	112	71	93	400	288	351 <sup>a</sup>	432	368	409 <sup>a</sup>	
167687	Q-50	WFIS	1/3/56	12/23/55	-	45.2	43.4	44.2	15.3	13.1	14.5	123	75	101	400	272	332 <sup>a</sup>	416	344	391 <sup>a</sup>	
167719	Q-51	WFIS	1/4/56	12/28/55	3	44.0	41.8	42.6	14.0	12.8	13.4	126	76	101	368	272	313 <sup>a</sup>	384	328	353 <sup>a</sup>	
168083	Q-52	WFIS	1/23/56	1/18/56	3	46.4	43.6	44.5	15.8	14.2	15.0	122	73	102	400	320	347 <sup>a</sup>	392	352	374 <sup>a</sup>	
168084	Q-53	WFIS	1/23/56	1/19/56	3	45.0	41.0	42.9	15.1	13.9	14.4	134	85	106	376	280	335	400	328	363 <sup>a</sup>	
Current Mill Average:							43.8		14.4			101				336		378			
Cumulative Mill Average:								42.5		13.3			109				341		378		
Mill Factor, %								103.1		108.3			92.7				98.5		100.0		
Mill Index, %								101.9		112.5			91.8				94.9		98.4		

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XX

MILL E--MISCELLANEOUS

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		Elmendorf Tear, g./sheet								
						Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.			
<u>47-lb. Drum Linerboard</u>																				
167946	E-199	W.F.	1/16/56	1/13/56	2	49.8	46.4	47.4	14.5	13.8	14.1	110	83	94	408	226	353 <sup>a</sup>	448	336	372 <sup>a</sup>
Current Mill Average:								47.4			14.1			94			353			372
Cumulative Mill Average:								46.9			14.2			101			395			402
Mill Factor, %								101.1			99.3			93.1			89.4			92.5
<u>33-lb. Linerboard</u>																				
168086	E-200	W.F.	1/23/56	1/19/56	2	34.6	32.6	33.9	10.6	9.7	10.2	100	55	73	296	192	258	304	232	255 <sup>a</sup>
<u>38-lb. Linerboard</u>																				
167945	E-198	W.F.S	1/16/56	1/11/56	2	39.0	36.4	37.4	12.0	10.8	11.4	106	64	93	360	272	313 <sup>a</sup>	320	248	271 <sup>a</sup>
<u>45-lb. Linerboard</u>																				
167681	E-194	W.F.S	1/3/56	12/27/55	2	47.6	45.4	46.8	15.1	14.0	14.5	121	92	107	408	320	366 <sup>a</sup>	472	344	397 <sup>a</sup>
<u>69-lb. Linerboard</u>																				
167799	E-197	W.F.	1/7/56	1/4/56	2	70.2	68.0	68.6	21.5	19.2	20.5	183	107	149	624	464	538 <sup>a</sup>	744	552	614 <sup>a</sup>

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

As a supplementary part of the Continuous Baseline Study, comparison of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. As may be noted in Table XXI, the atmospheric conditions used prior to and during the testing period varied considerably.

TABLE XXI

Code	Preconditioning			Conditioning		
	R.H., %	Temp., °F.	Time, hr.	R.H., %	Temp., °F.	Time, hr.
A		None		50-52	72-73	24
B	42-86	48-78	0.5	50	70	24-48
C	50	73	24-216	50	73	24-216
D	36	78	8	50-52	71-72	16
E		None		62-80	50-88	--
F		None		47-53	71-72	48
G		None		50	73	24
H		None		50	73	24
I	49-52	68-70	--	50-51	66-70	--
J		None		50	73	0.5
K	50	73	24	50	73	--
L		None		28-58	75-85	--
M		None		31-47	72-76	--
N	50	73	24	50	73	24
O		No samples submitted.				
P	50	73	24-48	50	73	48
Q	48-56	72-74	5-24	48-54	70-74	1-2

A summary of the mill comparisons for the current period as compared with the previous period may be seen in Tables XXII and XXIII, respectively. The comparison for the various mills is given in Tables XXIV to XXXX, for the 42-lb. liner samples. A comparison of the special drum stock is given in Table XLI. In all the comparisons given in Tables XXII to XLI, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XXII and XXIII indicates that agreement between the mill and Institute data is good in the majority of cases. Table XXII shows the average difference encountered in the comparison of Institute and mill test results for the sample lots submitted by each mill for the current period, as well as the maximum difference encountered in comparing the Institute and mill test results for a given sample lot. In Table XXIII, the average differences shown for each test in Table XXII have been calculated on a percentage basis for each mill. In addition, for purposes of comparison, the average percentage differences for the preceding two periods are shown.

It may be noted in Table XXIII that the maximum variation between the average basis weight results of the Institute and those of a given mill on corresponding samples is one per cent for the current period. This maximum percentage variation agrees favorably with the corresponding variations for the previous periods. Further, it may be noted that the average basis weight results for Mills A, C, E, F, I, J, L, M, and Q are lower than those for the Institute, the average results for Mills B, D, G, H, N, and P are higher and the average result for Mill K is the same. In general, the agreement between Institute and mill basis weight results is very good for all mills.

The maximum variation in caliper for the current period is seven per cent. Compared with the values for the Institute, the average result for Mill B is the same, and the average results for the other mills are lower. The accord between Institute and mill caliper values is good with the exception of Mills E, L, M, and Q.

It may be noted in Table XXIII that the bursting strength results exhibit a maximum variation of five per cent for the current period. The average results for Mills B, C, E, I, K, and N are higher than those for the Institute, the results for Mills A, F, H, P, and Q are the same, and the results for the other mills are lower. The agreement in bursting strength results is good for all mills.

It may be seen in Tables XXII and XXIII that the average machine direction tear results for Mills B, D, F, G, I, N, and P are higher than those for the Institute, and the results for the other mills are lower. The maximum variation for the current period is nineteen per cent. The differences encountered for Mills C, E, G, H, L, and M appear to be excessive.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills B, D, F, G, I, J, K, N, and P are higher than those for the Institute, and the average results for the other mills are lower. The maximum variation for the current period is fourteen per cent. Only the differences for Mills G and N appear to be excessive.



TABLE XXII

SUMMARY OF TEST RESULT COMPARISONS  
(Average Mill and Institute Results)

No. of Samples Compared	Mills*															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q
10	8	3	10	2	11	10	8	7	4	3	10	5	6	6	6	5
Basis Weight																
Institute	43.1	42.6	43.1	43.3	42.8	42.6	43.1	42.9	43.1	42.8	43.9	42.6	43.4	42.4	42.5	43.8
Mill	42.7	42.9	42.5	43.7	42.4	42.5	43.4	43.2	42.6	42.6	43.9	42.0	42.9	42.6	43.0	43.3
Av. Diff.**	-0.4	+0.3	-0.6	+0.4	-0.4	-0.1	+0.3	+0.3	-0.5	-0.2	0.0	-0.6	-0.5	+0.2	+0.5	-0.5
Max. Diff.***	-0.9	+0.6	-0.3	+1.3	-0.6	-0.3	+0.8	+0.7	-1.1	-0.7	-0.6	-1.6	-0.6	+0.6	+2.0	-0.3
Caliper																
Institute	12.4	11.9	13.4	12.3	13.7	11.7	12.4	12.4	12.5	12.3	13.6	13.0	13.3	12.5	12.3	14.4
Mill	12.0	11.9	13.0	12.4	12.8	11.4	12.1	12.1	12.2	12.3	13.1	12.4	12.6	12.1	11.9	13.6
Av. Diff.**	-0.4	0.0	-0.4	-0.4	-0.9	-0.3	-0.3	-0.3	-0.3	-0.5	-0.5	-0.6	-0.7	-0.4	-0.4	-0.8
Max. Diff.***	-0.9	+0.2	-0.6	-0.7	-1.0	-0.6	-0.4	-1.0	-0.7	-0.5	-0.8	-0.9	-0.9	-0.5	-0.8	-1.0
Bursting Strength																
Institute	112	119	102	111	106	105	110	113	103	107	105	111	114	110	108	101
Mill	112	120	107	110	108	105	109	113	110	104	107	103	113	112	108	101
Av. Diff.**	0	+1	+5	-1	+2	0	-1	C	+2	-3	+2	-3	-1	+2	0	0
Max. Diff.***	-9	+7	+9	-6	+3	+7	-5	+5	+5	-5	+4	-8	-5	+6	-4	+4
Tearing Strength, in																
Institute	321	307	321	343	351	374	315	358	316	367	376	331	357	357	348	336
Mill	303	303	261	353	291	383	358	306	330	348	348	294	311	376	374	332
Av. Diff.**	-18	+1	-60	+10	-60	+9	+43	-52	+14	-19	-28	-37	-46	+19	+26	-4
Max. Diff.***	-45	+25	-76	+55	-71	+41	+32	-68	+61	-71	-38	-85	-73	+55	+46	+24
Tearing Strength, across																
Institute	373	354	355	382	367	415	369	389	331	366	382	375	394	409	378	378
Mill	369	376	332	383	340	426	421	354	388	381	390	361	356	467	335	377
Av. Diff.**	-4	+22	-23	+1	-27	+11	+52	-35	+7	+15	+8	-14	-38	+58	+7	-1
Max. Diff.***	-20	+54	-44	-33	-29	+39	+67	-50	+34	+40	+17	-63	-55	+81	+18	+24

\* Comparison based on averages involved only those samples on which mill test data were submitted.

\*\* Average difference is the difference between the Institute mill average and the mill average based on mill test data.

\*\*\* Maximum difference encountered in comparing the Institute average and the mill average for any sample submitted by that particular mill.

TABLE XXIII  
COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS

Mill	Period	Basis Weight	Difference, per cent		Tearing Strength,	
			Caliper	Bursting Strength	In	Across
A	Current	-0.9	-3	0	-6	-1
	102nd	-1	-0.8	-0.9	-4	-2
	101st	-2	-2	-2	-5	-4
B	Current	+0.7	0	+0.8	+0.3	+6
	102nd	-0.5	+2	+3	-1	+6
	101st	-0.5	0	+2	-1	+5
C	Current	-1	-3	+5	-19	-6
	102nd	-0.7	-4	+6	-13	-3
	101st	-0.2	-0.3	+3	-6	+3
D	Current	+0.9	-3	-0.9	+3	+0.3
	102nd	+1	-2	-4	+1	+1
	101st	+0.5	-2	-4	-4	-3
E	Current	-0.9	-7	+2	-17	-7
	102nd	-0.5	-7	+7	-12	-4
	101st	-0.5	-10	+7	-10	-0.8
F	Current	-0.2	-3	0	+2	+3
	102nd	-1	-3	-3	0	+3
	101st	-0.2	-3	-0.9	+9	+10
G	Current	+0.7	-2	-0.9	+14	+14
	102nd	-1	-2	-3	+19	+14
	101st	-1	-3	-0.9	+15	+7
H	Current	+0.7	-2	0	-15	-9
	102nd	+2	-0.8	0	-7	+6
	101st	+1	-0.8	+0.9	-6	-4
I	Current	-1	-2	+2	+4	+2
	102nd	-0.7	-0.8	+4	+3	+5
	101st	-1	-0.3	+1	+0.9	+5
J	Current	-0.5	-4	-3	-5	+4
	102nd	-0.9	-4	-3	-11	-4
	101st	-1	-4	-5	-9	-0.5
K	Current	0	-4	+2	-7	+2
	102nd	-2	-4	-0.9	-8	+0.7
	101st	-1	-3	+4	-5	+2
L	Current	-1	-5	-3	-11	-4
	102nd	-1	-4	-3	-13	-7
	101st	-2	-3	-3	-6	-2
M	Current	-1	-5	-0.9	-13	-10
	102nd	-2	-7	+0.9	-11	-9
	101st	-0.7	-4	0	+2	-3
N	Current	+0.5	-3	+2	+5	+14
	102nd	-0.9	-2	-3	+4	+14
	101st	-0.5	-2	+0.9	+9	+17
O	Current	--	--	--	--	--
	102nd	+0.7	-2	-4	-6	-2
	101st	+0.5	-2	+2	-8	-0.5
P	Current	+1	-3	0	+7	+2
	102nd	0	-2	-3	+6	0
	101st	-0.9	-4	-3	+7	+0.3
Q	Current	-1	-6	0	-1	-0.3
	102nd	-1	-4	+1	+3	+6
	101st	-3	-4	+4	0	+4

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956

TABLE XXIV

MILL A-42-IR. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet		
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	In	IPC	Across
167715	A-716	W.F.	12/30/55	2	43.9	43.2	-0.7	12.5	12.1	-0.4	110	111	+1	341 <sup>a</sup>	313	375
167716	A-717	W.F.	12/31/55	2	43.9	43.0	-0.9	13.0	12.1	-0.9	109	111	+2	334	289	363
167882	A-718	W.F.	1/2/56	1	43.1	43.0	-0.1	12.4	11.9	-0.5	111	110	-1	332 <sup>a</sup>	318	378
167883	A-719	W.F.	1/3/56	1	43.4	43.1	-0.3	12.4	12.0	-0.4	107	108	+1	331 <sup>a</sup>	302	368
167960	A-720	W.F.	1/8/56	2	42.9	42.5	-0.4	12.1	11.9	-0.2	121	115	-6	291	294	369
167961	A-721	W.F.	1/9/56	2	43.3	42.7	-0.6	12.2	11.8	-0.4	123	114	-9	316 <sup>a</sup>	287	363
168064	A-722	W.F.	1/16/56	1	43.0	42.5	-0.5	12.4	12.0	-0.4	108	111	+3	342 <sup>a</sup>	325	373
168065	A-723	W.F.	1/16/56	1	43.0	42.7	-0.3	12.5	12.0	-0.5	109	112	+3	326 <sup>a</sup>	315	371
168138	A-724	W.F.	1/23/56	2	42.6	42.4	-0.2	12.4	12.0	-0.4	111	113	+2	305 <sup>a</sup>	290	364
168139	A-725	W.F.	1/23/56	1	42.2	42.3	+0.1	12.2	12.0	-0.2	108	113	+5	296 <sup>a</sup>	299	366
Current Mill Average:					43.1	42.7	-0.4	12.4	12.0	-0.4	112	112	0	321	303	369
															-18	-4

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XXV

MILL B-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet		
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
167668	B-1258	W.F.	12/20/55	1	42.6	42.9	+0.3	11.9	12.0	+0.1	115	122	+7	300 <sup>a</sup>	311	+11
167669	B-1259	W.F.	12/22/55	1	42.8	43.0	+0.2	11.9	12.0	+0.1	118	119	+1	311	313	+2
167717	B-1260	W.F.	12/28/55	1	42.4	42.9	+0.5	12.0	12.0	0.0	118	119	+1	293 <sup>a</sup>	318	+25
167718	B-1261	W.F.	12/30/55	1	42.6	43.2	+0.6	11.8	12.0	+0.2	119	119	0	307	313	+6
167939	B-1262	W.F.	1/ 2/56	1	42.6	42.7	+0.1	11.8	11.8	0.0	119	121	+2	300	296	-4
167940	B-1263	W.F.	1/ 4/56	1	41.8	42.4	+0.6	11.8	11.8	0.0	119	118	-1	317 <sup>a</sup>	294	-23
167970	B-1264	W.F.	1/ 8/56	1	42.8	42.8	0.0	11.9	12.0	+0.1	118	120	+2	305	304	-1
167971	B-1265	W.F.	1/10/56	1	42.8	43.2	+0.4	12.0	12.0	0.0	123	120	-3	325 <sup>a</sup>	315	-10
Current Mill Average:					42.6	42.9	+0.3	11.9	11.9	0.0	119	120	+1	307	308	+1
														354	376	+22

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XXVI

MILL C-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. Gage		In Elmendorf Tear, g./sheet		Across	
					IPC	Mill	IPC	Mill	IPC	Mill	IPC	Mill	IPC	Mill
167822	C-721	WF ISL	12/19/55	1	44.2	43.5	13.7	13.3	98	103	330 <sup>a</sup>	274	348 <sup>a</sup>	346
167823	C-722	WF ISL	12/19/55	1	43.8	43.4	13.9	13.4	96	105	313 <sup>a</sup>	273	349 <sup>a</sup>	346
167824	C-723	WF ISL	12/27/55	1	42.4	41.7	13.3	12.8	103	106	320 <sup>a</sup>	244	342 <sup>a</sup>	304
167809	C-724	WF ISL	12/27/55	1	42.1	41.5	13.1	12.8	103	108	307 <sup>a</sup>	240	351 <sup>a</sup>	318
167810	C-725	WF ISL	12/28/55	1	42.6	42.5	13.5	12.9	106	111	317 <sup>a</sup>	252	361 <sup>a</sup>	326
167811	C-726	WF ISL	12/28/55	1	43.0	42.3	13.4	13.0	108	110	322 <sup>a</sup>	250	363 <sup>a</sup>	319
167877	C-727	WF ISL	12/29/55	1	43.4	42.6	13.2	12.8	110	107	338	272	361 <sup>a</sup>	348
167878	C-728	WF ISL	12/29/55	1	43.2	42.6	13.1	12.8	104	107	323 <sup>a</sup>	284	365 <sup>a</sup>	349
Current Mill Average:					43.1	42.5	13.4	13.0	102	107	321	261	355	332
						-0.6		-0.4		+5		-60		-23

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956

TABLE XXVII

MILL D--42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		In		g./sheet		Across	
					IPC	Diff.	IPC	Diff.	IPC	Diff.	IPC	Diff.	IPC	Diff.	IPC	Diff.
167690	D-933	W.F.	12/29/55	4	42.8	+0.1	12.6	12.6	0.0	-6	110	104	339 <sup>a</sup>	+20	388 <sup>a</sup>	-1
167708	D-934	W.F.	12/30/55	4	43.4	-0.2	12.3	12.0	-0.3	0	114	114	345 <sup>a</sup>	+2	374 <sup>a</sup>	-3
167740	D-935	W.F.	12/31/55	4	42.2	+1.3	12.1	12.2	+0.1	-3	115	112	325 <sup>a</sup>	+55	377 <sup>a</sup>	+16
167879	D-936	W.F.	1/ 5/56	4	42.4	+0.6	12.9	12.2	-0.7	-2	111	109	345 <sup>a</sup>	-4	367 <sup>a</sup>	+9
167880	D-937	W.F.	1/ 6/56	4	44.6	-0.1	12.7	12.1	-0.6	-2	115	113	372 <sup>a</sup>	-4	405 <sup>a</sup>	-33
167881	D-938	W.F.	1/ 7/56	4	43.3	-0.3	12.7	12.3	-0.4	-2	109	107	362 <sup>a</sup>	-27	383 <sup>a</sup>	-4
168045	D-939	W.F.	1/12/56	4	44.2	-0.2	13.8	13.1	-0.7	0	106	106	349 <sup>a</sup>	+12	386 <sup>a</sup>	+1
168045	D-940	W.F.	1/13/56	4	44.0	+0.8	13.8	12.9	-0.4	-2	111	109	341 <sup>a</sup>	+4	399 <sup>a</sup>	+9
168077	D-941	W.F.	1/18/56	4	43.8	+0.9	13.1	12.8	-0.3	+2	111	113	349 <sup>a</sup>	+11	383 <sup>a</sup>	+9
168078	D-942	W.F.	1/19/56	4	42.8	+0.7	12.4	12.1	-0.3	0	112	112	303 <sup>a</sup>	+32	363 <sup>a</sup>	0
Current Mill Average:					43.3	+0.4	12.8	12.4	-0.4	-1	111	110	343	+10	382	+1

TABLE XXVIII

MILL E--42-LB. LINERBOARD

167682	E-195	W.F.S	12/29/55	2	42.6	-0.3	13.5	12.7	-0.8	+8	102	110	367 <sup>a</sup>	-71	373 <sup>a</sup>	-29
167798	E-196	W.F.S	1/ 3/56	2	43.0	-0.6	14.0	13.0	-1.0	-4	110	106	334 <sup>a</sup>	-48	361 <sup>a</sup>	-26
Current Mill Average:					42.8	-0.4	13.7	12.8	-0.9	+2	106	108	351	-60	367	-27

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XXIX

MILL F--42-1B. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		In		Elmendorf Tear, g./sheet		Across	
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.
167674	F-72	W.B.	12/ 2/55	-	43.0	42.2 -0.8	11.4	11.0 -0.4	108	106 -2	377a	389	394a	425	425	+31
167675	F-73	W.B.	12/ 7/55	-	42.8	42.1 -0.7	11.9	11.7 -0.2	100	96 -4	375a	411	429a	424	424	-5
167676	F-74	W.B.	12/ 9/55	-	41.1	41.7 +0.6	11.7	11.3 -0.4	101	101 0	354a	395	405a	444	444	+39
167677	F-75	W.B.	12/ 9/55	-	42.8	42.0 -0.8	11.9	11.6 -0.3	104	101 -3	377a	407	423a	437	437	+14
167678	F-76	W.B.	12/15/55	-	41.8	42.1 +0.3	11.7	11.4 -0.3	101	95 -6	381a	388	415a	407	407	-8
167679	F-77	W.B.	12/15/55	-	43.1	43.0 -0.1	11.9	11.6 -0.3	103	100 -3	366a	373	418a	427	427	+9
168087	F-1	W.B.	1/ 3/56	-	43.3	42.8 -0.5	11.6	11.0 -0.6	112	107 -5	355a	339	383a	385	385	+2
168088	F-2	W.B.	1/ 6/56	-	43.1	42.9 -0.2	11.8	11.4 -0.4	109	116 +7	371a	369	419a	425	425	+6
168103	F-3	W.B.	1/ 6/56	-	42.0	41.9 -0.1	11.7	11.4 -0.3	108	112 +4	382a	375	423a	443	443	+20
168104	F-4	W.B.	1/13/56	-	43.0	43.1 +0.1	11.6	11.3 -0.3	107	112 +5	375a	372	409a	424	424	+15
168105	F-5	W.B.	1/16/56	-	43.0	43.3 +0.3	11.9	11.4 -0.5	102	109 +7	401a	399	443a	442	442	-1
Current Mill Average:					42.6	42.5 -0.1	11.7	11.4 -0.3	105	105 0	374	383	415	426	426	+11

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XXX

MILL G--42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet		
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	In	IPC	Across
167943	G-701	W.F.	12/28/55	2	44.3	44.6	+0.3	12.8	12.5	-0.3	113	112	-1	416	334 <sup>a</sup>	448
167944	G-702	W.F.	12/28/55	2	44.3	44.6	+0.3	12.8	12.5	-0.3	111	111	0	374	327 <sup>a</sup>	438
167963	G-703	W.F.	12/30/55	2	44.2	45.0	+0.8	12.9	12.6	-0.3	118	113	-5	356	338 <sup>a</sup>	435
167964	G-704	W.F.	12/30/55	2	44.7	45.0	+0.3	12.5	12.6	+0.1	112	114	+2	352	331 <sup>a</sup>	429
167965	G-705	W.F.	12/28/55	2	43.9	44.5	+0.6	12.5	12.1	-0.4	117	113	-4	378	331	440
167966	G-706	W.F.	12/22/55	2	42.8	42.7	-0.1	12.0	11.7	-0.3	106	104	-2	337	290 <sup>a</sup>	406
167967	G-707	W.F.	12/22/55	2	42.2	42.7	+0.5	12.0	11.8	-0.2	104	104	0	342	319 <sup>a</sup>	422
167968	G-708	W.F.	1/10/56	2	41.5	41.7	+0.2	12.0	11.7	-0.3	104	106	+2	341	303 <sup>a</sup>	399
168047	G-709	W.F.	1/10/56	2	41.4	41.6	+0.2	12.1	11.8	-0.3	108	106	-2	344	286	397
168048	G-710	W.F.	1/10/56	2	41.8	42.0	+0.2	12.1	11.7	-0.4	107	106	-1	342	293 <sup>a</sup>	393
Current Mill Average:					43.1	43.4	+0.3	12.4	12.1	-0.3	110	109	-1	358	315	421
															369	+52

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.



COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)<sup>a</sup>

TABLE AAAI  
MILL H--42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, Points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet		
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
167773	H-547	W.F. b	12/18/55	2	43.7	44.4	+0.7	12.1	12.3	+0.2	118	116	-2	383 <sup>a</sup>	329	-54
167774	H-548	W.F. b	12/20/55	2	42.2	42.9	+0.7	12.3	12.2	-0.1	110	115	+5	336	309	-27
167775	H-549	W.F. b	12/28/55	2	42.4	42.8	+0.4	13.1	12.1	-1.0	111	112	+1	344	289	-55
167776	H-550	W.F. b	12/29/55	2	43.1	42.8	-0.3	12.9	12.0	-0.9	111	111	0	359 <sup>a</sup>	313	-46
167972	H-551	W.F. b	1/ 2/56	2	43.0	42.9	-0.1	11.9	12.1	+0.2	112	113	+1	358	322	-36
167973	H-552	W.F. b	1/ 3/56	2	43.0	43.1	+0.1	12.3	12.2	-0.1	108	107	-1	367 <sup>a</sup>	299	-68
167974	H-553	W.F. b	1/ 8/56	2	43.8	43.8	0.0	12.3	12.2	-0.1	118	115	-3	377 <sup>a</sup>	312	-65
167975	H-554	W.F. b	1/ 9/56	2	42.2	42.9	+0.7	12.2	12.1	-0.1	115	112	-3	340 <sup>a</sup>	278	-62
Current Mill Average:					42.9	43.2	+0.3	12.4	12.1	-0.3	113	113	0	358	306	-52
																-35

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

<sup>b</sup>The mill data sheet identifies the Finish as WFLS.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XXXII

MILL I--42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet	
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Across
167680	I-516	WFLS	12/17/55	1	43.3	42.6 -0.7	12.2	12.2 0.0	104	107 +3	330 <sup>a</sup>	339
167720	I-517	WFLS	12/28/55	1	43.2	42.8 -0.4	12.1	12.0 -0.1	107	108 +1	296	357
167947	I-518	WFLS	1/ 5/56	1	42.9	42.6 -0.3	12.1	12.1 0.0	110	109 -1	307	303
167948	I-519	WFLS	1/ 9/56	1	43.0	42.4 -0.6	12.1	12.0 -0.1	108	112 +4	335 <sup>a</sup>	321
168066	I-520	WFLS	1/11/56	1	43.1	42.5 -0.6	13.1	12.4 -0.7	111	110 -1	311 <sup>a</sup>	318
168067	I-521	WFLS	1/12/56	1	43.7	42.6 -1.1	13.1	12.4 -0.7	112	111 -1	314	333
168102	I-522	WFLS	1/17/56	1	42.8	42.5 -0.3	12.7	12.2 -0.5	106	111 +5	318 <sup>a</sup>	339
Current Mill Average:					43.1	42.6 -0.5	12.5	12.2 -0.3	108	110 +2	316	330
											381	388
											+14	+7

TABLE XXXIII

MILL J--42-LB. LINERBOARD

167688	J-573	W.F.	12/21/55	-	43.7	43.0 -0.7	13.1	12.6 -0.5	104	104 0	395 <sup>a</sup>	324
167689	J-574	W.F.	12/21/55	-	43.5	43.1 -0.4	13.0	12.7 -0.3	107	103 -4	367 <sup>a</sup>	373
167807	J-575	W.F.	1/ 2/56	-	41.6	41.4 -0.2	12.4	11.9 -0.5	109	104 -5	347 <sup>a</sup>	330
167808	J-576	W.F.	1/ 3/56	-	42.5	42.9 +0.4	12.5	12.0 -0.5	108	103 -5	361 <sup>a</sup>	367
Current Mill Average:					42.8	42.6 -0.2	12.8	12.3 -0.5	107	104 -3	367	348
											366	381
											-19	+15

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XXXIV

MILL K--42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet				
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.		
167772	K-1	S.F.	1/ 2/56	7	43.2	43.4	+0.2	12.9	12.6	-0.3	103	105	+2	381 <sup>a</sup>	343	387 <sup>a</sup>	376	-11 <sup>a</sup>
168062	K-2	S.F.	1/11/56	7	44.2	44.5	+0.3	13.6	13.2	-0.4	107	111	+4	385 <sup>a</sup>	360	383 <sup>a</sup>	399	+16
168085	K-3	S.F.	1/18/56	7	44.4	43.8	-0.6	14.3	13.5	-0.8	106	105	-1	360 <sup>a</sup>	342	377 <sup>a</sup>	394	+17
Current Mill Average:					43.9	43.9	0.0	13.6	13.1	-0.5	105	107	+2	376	348	382	390	+ 8

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XXXVI

MILL M--42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i.			Elmendorf Tear, g./sheet		
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	In	Diff.	Across
167667	N-356	W.	12/13/55	2	43.3	42.7	-0.6	13.1	12.6	-0.5	111	113	+2	347 <sup>a</sup>	298	363
167685	N-357	W.	12/23/55	2	43.2	43.0	-0.2	13.6	13.1	-0.5	112	110	-2	329 <sup>a</sup>	327	358
167739	M-358	W.	12/29/55	4	43.8	43.4	-0.4	13.4	12.8	-0.6	117	116	-1	392 <sup>a</sup>	332	367
167969	M-359	W.	1/ 6/56	4	43.6	43.2	-0.4	13.3	12.4	-0.9	113	111	-2	387 <sup>a</sup>	314	345
168135	M-360	W.	1/12/56	2	42.7	42.2	-0.5	12.8	12.2	-0.6	119	114	-5	332 <sup>a</sup>	286	349
Current Mill Average:					43.4	42.9	-0.5	13.3	12.6	-0.7	114	113	-1	357	311	356

TABLE XXXVII

MILL N--42-LB. LINERBOARD

167665	N-177	WFLS	12/17/55	1	42.5	42.9	+0.4	12.4	12.0	-0.4	111	115	+4	349 <sup>a</sup>	404	472
167666	N-178	WFLS	12/16/55	1	41.7	41.9	+0.2	12.2	12.1	-0.1	106	107	+1	341 <sup>a</sup>	389	481
167941	N-179	WFLS	1/ 1/56	1	43.8	43.7	-0.1	12.8	12.3	-0.5	112	113	+1	362 <sup>a</sup>	362	475
167942	N-180	WFLS	1/ 1/56	1	42.0	42.6	+0.6	12.1	11.8	-0.3	105	105	0	354 <sup>a</sup>	339	441
167962	N-181	--	1/10/56	1	42.0	42.2	+0.2	12.6	12.2	-0.4	116	118	+2	363 <sup>a</sup>	362	468
168061	N-182	WFLS	1/11/56	1	42.5	42.6	+0.1	12.8	12.3	-0.5	110	116	+6	371 <sup>a</sup>	398	467
Current Mill Average:					42.4	42.6	+0.2	12.5	12.1	-0.4	110	112	+2	357	376	467

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1950 (continued)

TABLE ANNEXII

MILL O--42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, Points		Bursting Strength, P.S.I. Range		In		Elmendorf Tear, g./sheet		Across
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	

No samples submitted

TABLE ANNIX

MILL F--42-LB. LINERBOARD

167739	F-138	W.F.	12/19/55	-	43.0	43.0	0.0	12.4	11.9	-0.3	108	110	+2	308 <sup>a</sup>	353	+15	414 <sup>a</sup>	405	-9
167710	F-139	W.F.	12/19/55	-	42.5	43.0	+0.5	12.2	11.9	-0.3	112	108	-4	364 <sup>a</sup>	393	+29	388 <sup>a</sup>	400	+12
167711	F-140	W.F.	12/19/55	-	42.5	42.5	0.0	12.1	11.7	-0.4	111	112	+1	343 <sup>a</sup>	389	+46	380 <sup>a</sup>	393	+13
167712	F-141	W.F.	12/19/55	-	42.1	44.1	+2.0	12.3	12.1	-0.2	109	110	+1	345 <sup>a</sup>	363	+18	367 <sup>a</sup>	381	+14
167713	F-142	W.F.	12/21/55	-	43.2	43.2	0.0	12.6	12.3	-0.3	107	106	-1	337 <sup>a</sup>	369	+32	357 <sup>a</sup>	375	+18
167714	F-143	W.F.	12/21/55	-	41.6	42.4	+0.8	12.1	11.8	-0.3	102	104	+2	328 <sup>a</sup>	347	+19	361 <sup>a</sup>	355	-6
Current Mill Average:					42.5	43.0	+0.5	12.3	11.9	-0.4	108	108	0	348	374	+26	378	385	+7

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XXX

MILL Q-42-LB. LINERBOARD

File No.	Mill Code	Finish	Date Made	kch. No.	Basis Weight, lb.		Caliper, Points		Bursting Strength, P.S.I. gage		In		Elimendorf Tear, g./sheet	
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	IPC	Mill
167686	Q-49	WFLS	12/21/55	-	44.8	44.0	-0.8	14.8	13.9	-0.9	93	95	-2	351a
167687	Q-50	WFLS	12/23/55	-	44.2	43.4	-0.8	14.5	13.8	-0.7	101	101	0	332a
167719	Q-51	WFLS	12/28/55	3	42.6	42.4	-0.2	13.4	12.9	-0.5	101	105	+4	313a
168083	Q-52	WFLS	1/18/56	3	44.5	44.2	-0.3	15.0	14.0	-1.0	102	100	-2	347a
168084	Q-53	WFLS	1/19/56	3	42.9	42.2	-0.7	14.4	13.6	-0.8	106	106	0	335
Current Mill Average:					43.8	43.3	-0.5	14.4	13.6	-0.8	101	101	0	336
											332	332	-4	378
														377

TABLE XLI

MILL E--MISCELLANEOUS

47-LB. Drum Linerboard

167946	E-199	W.F.	1/13/56	2	47.4	48.8	+1.4	14.1	13.8	-0.3	94	100	+6	353a	388	+35	372a	418	+46
Current Mill Average:					47.4	48.8	+1.4	14.1	13.8	-0.3	94	100	+6	353	386	+35	372	418	+46

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1956 (continued)

TABLE XII (continued)

MILL E--MISCELLANEOUS

File No.	Mill Code	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet			
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.
<u>33-lb. Linerboard</u>														
163086	E-200	W.F.	1/19/56	2	33.9	33.9 0.0	10.2	10 -0.2	78	76 -2	258	256 -2	255 <sup>a</sup>	268 +13
<u>38-lb. Linerboard</u>														
167945	E-198	W.FLS	1/11/56	2	37.4	37.7 +0.3	11.4	11 -0.4	93	98 +5	313 <sup>a</sup>	298 -15	271 <sup>a</sup>	298 +27
<u>45-lb. Linerboard</u>														
167661	E-194	W.FLS	12/27/55	2	46.8	46.2 -0.6	14.5	13.5 -1.0	107	110 +3	366 <sup>a</sup>	334 -32	397 <sup>a</sup>	402 +5
<u>69-lb. Linerboard</u>														
167799	E-197	W.F.	1/4/56	2	68.6	69.7 +1.1	20.5	20 -0.5	149	154 +5	538 <sup>a</sup>	531 -7	614 <sup>a</sup>	608 -6

<sup>a</sup>This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.